C. L. Pierce,

Splitting Wood.

No. 39,420. Patented Aug. 4, 1863.

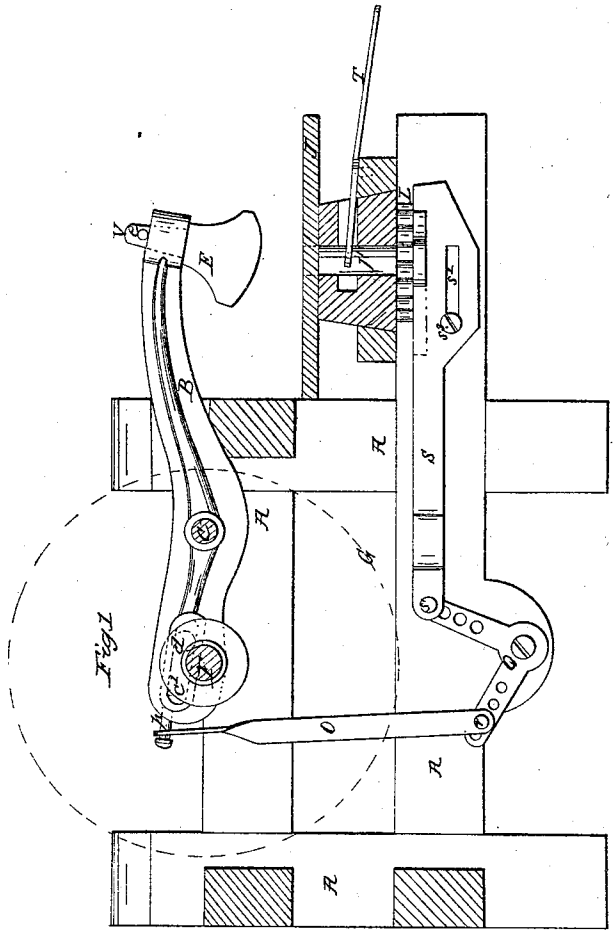


Fig 1

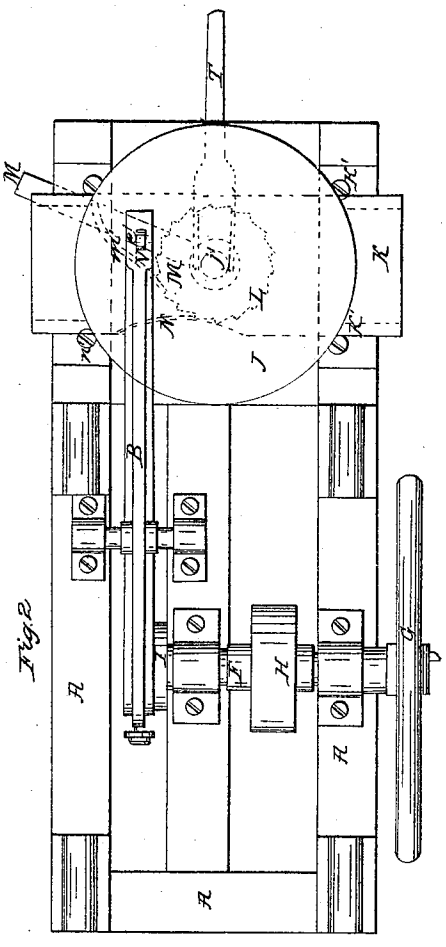


Fig 2

Witnesses:

E. B. Forbush

Geo. W. Wallace

Inventor:

Chas. L. Pierce

AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

CHARLES L. PIERCE, OF BUFFALO, NEW YORK.

IMPROVEMENT IN WOOD-SPLITTERS.

Specification forming part of Letters Patent No. **39,420**, dated August 4, 1863.

To all whom it may concern:

Be it known that I, CHARLES L. PIERCE, of the city of Buffalo, in the county of Erie and State of New York, have invented a new and Improved Wood-Splitter; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure I is a longitudinal section. Fig. II is a top plan.

Letters of like name and kind refer to like parts in each of the figures.

A represents the frame-work of the machine, which may be built of wood or iron, as preferred.

B is a lever, which operates the ax. It is supported upon the shaft C, which shaft serves as a fulcrum. A long slot is made in the end of the lever, as shown at e', in which the crank-pin d works.

The ax E is made thick and heavy, adapted for splitting, and is keyed to the opposite end of the lever, as shown at e'.

F is the driving-shaft; G, fly-wheel on said shaft; H, driving-pulley; I, crank-wheel fastened to the end of the driving-shaft, and to which the crank-pin is connected.

J is a circular metallic plate, which has a vertical shaft, j', passing through the head-block K, which has a transverse movement between the guides K'. Upon the lower end of the shaft j' is a ratchet-wheel, L, and arm M, which is made to vibrate upon the shaft, and which carries a dog, m', which operates the ratchet-wheel to revolve the plate.

N is a spring-dog fastened to the frame by the screw n', and catching in the teeth of the ratchet-wheel, to prevent a backward movement of the plate.

O is a bar or rod, which connects with the end of the ax-lever by means of the bolt p and to the bent lever Q by means of a pin or bolt, r.

S is a flat bar or lever, which is connected to the bent lever, as shown at s'. It has a long slot near its opposite end, as shown at s^2, to allow it to make a horizontal reciprocating movement. A screw-bolt, s^3, connect it to the frame. This bar connects with the ratchet-lever M, which passes through a slot made in its end.

T is a forked lever, which takes hold of the shaft j' in order to move the head-block K back and forth, as required to bring the block of wood to be split under the ax.

The ax E is of peculiar construction. It is made with a long shank, V, having flush shoulders, which shank passes through a mortise in the end of the lever. A key passes through the shank on the upper side of the lever to hold it firmly in place. This is a cheap, strong, and convenient mode of fastening the ax to the lever. By driving out the key e', the ax may be easily taken out for grinding or for repair.

Operation: The block of wood to be split is placed upon the plate J in a proper position to receive the blows from the ax. Power being applied and the machine put in motion, the ax will be operated by means of the crank-pin d working in the slot e', so as to deal successive blows upon the wood or block placed upon the plate J. The movement of the ax-lever B will, through the connecting-bar O, bent lever Q, and sliding lever S and ratchet-lever M, communicate motion to the wheel L, and thereby revolve the plate J and the blocks of wood thereon, so as to bring the blocks under the ax in a manner to split it up into such slabs or sticks as may be desired. The forked lever T enables the operator to give the head-block K a transverse movement and therewith the plate J, so that the block of wood may be split into slabs or sticks of any desired size or thickness.

This machine is also designed for splitting slabs from shingle-blocks, or what is sometimes called "sapping shingle-blocks." When used for this purpose, the revolving plate T is very useful.

When the machine is used for splitting stove-wood, the pieces to be split may be fed up to the ax by hand, in which case the plate T need not be revolved; or, if the machine is designed for that alone, the plate T and de-

vices for revolving it may be omitted entirely and a stationary bed or block on which to place the wood used instead thereof.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The lever B, supported and moving upon the fulcrum-shaft C, in connection with the ax E, and operated by a crank, D, for the purposes and substantially as herein described.

2. The ax E and lever B, supported and moving upon a fulcrum-shaft, as aforesaid, in combination with the head-block K and revolving plate J, for the purpose and substantially as described.

3. Constructing the ax with a shank provided with a key, as a means of fastening the ax to the lever.

CHAS. L. PIERCE.

Witnesses:
GEO. W. WALLACE,
E. B. FORBUSH.